

CLAIMS

1. A refrigerator incorporating (4, 5, 6) in its door (1) a water dispenser within a compartment (2) present on the outside of the door, characterised in that the dispenser is connected to a water container (7) of given capacity carried by the door and provided to enable the contained water to be carbonated via a connection to a cylinder (11) which contains the carbonating gas and is also located in the door (1).
2. A refrigerator as claimed in claim 1, wherein the cylinder (11) is disposed in a chamber (10) of the door (1), the chamber being accessible from the inside or from the outside of the door via a shutter.
3. A refrigerator as claimed in claim 1 or claims 1 and 2, wherein the cylinder (11) and the container (7) are connected together via a solenoid valve (26).
4. A refrigerator as claimed in claim 3, wherein the container (7) is provided with a water level sensor (34) which, when a given water level has been reached within the container, activates a means which indicates to the user that the water can now be carbonated by his operating the solenoid valve (26).
5. A refrigerator as claimed in one or more of the preceding claims, wherein the container (7) can be connected to the domestic water supply or to a possibly cooled source of water via a valve means (32A).
6. A refrigerator as claimed in one or more of the preceding claims, wherein the container (7) is provided with safety means (35) against excess pressure.
7. A refrigerator as claimed in one or more of the preceding claims, wherein in the connection between the cylinder (11) and container (7),

upstream of the solenoid valve (26), a needle valve (24) is present cooperating with the cylinder (11).

8. A refrigerator as claimed in one or more of the preceding claims, wherein the safety valve (35) operates on an electrical switch to interrupt, at a predetermined carbonation pressure, the connection between the cylinder (11) and the container (7).

9. A refrigerator as claimed in claim 8, wherein said switch activates an indicator advising the user that the water is carbonated and ready to be drawn off.

10. A refrigerator as claimed in one or more of the preceding claims, wherein means connected to an indicator lamp are provided to indicate when the cylinder (11) is empty.